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TITLE : INK-JET RECORDING SYSTEM AND INK-JET RECORDING METHOD

ABSTRACT : PURPOSE: To form a clear fine image with dots superior in shape by using an ink having the concentration of the dye within a specific range to a material to be recorded, and making recording under specific conditions such as the maximum striking amount of ink, the maximum overlapping number of characters etc.

CONSTITUTION: A using material to be recorded has a surface layer made of a mixture of a pigment and a fibrous substance of a base paper on the base paper, with the Stockigt sizing degree in the range of 0-15 seconds. The ink-jet recording system records the recording material by applying small drops of water inks, namely, yellow ink, magenta ink, cyan ink and black ink. The black ink should have the concentration of the dye at least in the range of 2.5-4.5wt.%. Moreover, the maximum striking amount of ink is  $14\text{nl/mm}^2$ - $20\text{nl/mm}^2$  and the maximum overlapping number of characters should be 2-2.5. It is desirable that the recording material is  $90\text{-}140\mu\text{m}$ , and more preferably  $100\text{-}130\mu\text{m}$ , particularly  $105\text{-}125\mu\text{m}$  thick. In the case where the maximum striking amount of ink is lower than  $14\text{nl/mm}^2$ , or the concentration of the dye is lower than 2.5%, it is impossible to achieve cockling and strike through while satisfying the image density.

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